# **SIEMENS**

Data sheet 3RT2018-1AP01



power contactor, AC-3e/AC-3, 16 A, 7.5 kW / 400 V, 3-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO, screw terminal, size: S00  $\,$ 

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	\$00
product extension	
function module for communication	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
• at AC in hot operating state	3 W
• at AC in hot operating state per pole	1 W
<ul> <li>without load current share typical</li> </ul>	1.5 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating cycles)	
<ul> <li>of contactor typical</li> </ul>	30 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
of the contactor with added auxiliary switch block typical	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Environmental footprint	

Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	39.6 kg
Global Warming Potential [CO2 eq] during manufacturing	1.18 kg
Global Warming Potential [CO2 eq] during manufacturing  Global Warming Potential [CO2 eq] during operation	38.5 kg
Global Warming Potential [CO2 eq] during operation  Global Warming Potential [CO2 eq] after end of life	-0.155 kg
Main circuit	-0.135 kg
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	3
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C rated value	22 A
• at AC-1	
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	22 A
— up to 690 V at ambient temperature 60 °C rated value	20 A
• at AC-3	
— at 400 V rated value	16 A
— at 500 V rated value	12.4 A
— at 690 V rated value	8.9 A
at AC-3e  at 400 V rated value.	16 A
— at 400 V rated value	12.4 A
— at 500 V rated value — at 690 V rated value	8.9 A
at AC-4 at 400 V rated value	11.5 A
at AC-5a up to 690 V rated value	19.4 A
at AG-5b up to 400 V rated value	13.2 A
• at AC-6a	10.27
— up to 230 V for current peak value n=20 rated value	9.6 A
— up to 400 V for current peak value n=20 rated value	9.6 A
— up to 500 V for current peak value n=20 rated value	9.6 A
— up to 690 V for current peak value n=20 rated value	8.9 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	6.6 A
— up to 400 V for current peak value n=30 rated value	6.4 A
— up to 500 V for current peak value n=30 rated value	6.4 A
<ul> <li>up to 690 V for current peak value n=30 rated value</li> </ul>	6.4 A
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm²
operational current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	5.5 A
at 690 V rated value	4.4 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	2.1 A
— at 220 V rated value	0.8 A 0.6 A
— at 440 V rated value — at 600 V rated value	0.6 A
at 600 V rated value     with 2 current paths in series at DC-1	V.U A
at 24 V rated value	20 A
— at 60 V rated value	20 A
— at 110 V rated value	12 A
— at 220 V rated value	1.6 A
— at 440 V rated value	0.8 A
— at 600 V rated value	0.7 A
with 3 current paths in series at DC-1	
·	

- at 24 V rated value 20 A - at 60 V rated value 20 A - at 110 V rated value 20 A - at 220 V rated value 20 A - at 440 V rated value 1.3 A - at 600 V rated value 1 A  • at 1 current path at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 20 A - at 110 V rated value 20 A - at 60 V rated value 20 A - at 60 V rated value 20 A - at 110 V rated value 20 A - at 24 V rated value 20 A - at 24 V rated value 20 A - at 60 V rated value 20 A	
- at 110 V rated value 20 A - at 220 V rated value 20 A - at 440 V rated value 1.3 A - at 600 V rated value 1 A  • at 1 current path at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 30.5 A - at 110 V rated value 30.15 A  • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 5 A - at 110 V rated value 5 A - at 110 V rated value 20 A  • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A  • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 20 A	
- at 220 V rated value 20 A - at 440 V rated value 1.3 A - at 600 V rated value 1 A  • at 1 current path at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 0.5 A - at 110 V rated value 0.15 A  • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 5 A • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A  • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A	
- at 440 V rated value	
- at 600 V rated value  • at 1 current path at DC-3 at DC-5  - at 24 V rated value  - at 600 V rated value  - at 60 V rated value  - at 110 V rated value  • with 2 current paths in series at DC-3 at DC-5  - at 24 V rated value  - at 60 V rated value  - at 60 V rated value  - at 110 V rated value  - at 110 V rated value  • with 3 current paths in series at DC-3 at DC-5  - at 24 V rated value  - at 60 V rated value  20 A  • with 3 current paths in series at DC-3 at DC-5  - at 24 V rated value  20 A	
<ul> <li>at 1 current path at DC-3 at DC-5         <ul> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul> </li> <li>at 110 V rated value</li> <li>with 2 current paths in series at DC-3 at DC-5         <ul> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul> </li> <li>with 3 current paths in series at DC-3 at DC-5         <ul> <li>at 24 V rated value</li> <li>at 60 V rated value</li> </ul> </li> </ul>	
- at 24 V rated value 20 A - at 60 V rated value 0.5 A - at 110 V rated value 0.15 A  • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 0.35 A  • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 20 A - at 60 V rated value 20 A	
- at 60 V rated value 0.5 A - at 110 V rated value 0.15 A  • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 0.35 A  • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 20 A - at 60 V rated value 20 A	
<ul> <li>— at 110 V rated value</li> <li>• with 2 current paths in series at DC-3 at DC-5</li> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 110 V rated value</li> <li>• with 3 current paths in series at DC-3 at DC-5</li> <li>— at 24 V rated value</li> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>— at 60 V rated value</li> </ul>	
<ul> <li>with 2 current paths in series at DC-3 at DC-5         <ul> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul> </li> <li>with 3 current paths in series at DC-3 at DC-5         <ul> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> </ul> </li> </ul>	
- at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 0.35 A  • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 20 A	
<ul> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>with 3 current paths in series at DC-3 at DC-5</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>20 A</li> </ul>	
- at 110 V rated value 0.35 A  • with 3 current paths in series at DC-3 at DC-5  - at 24 V rated value 20 A  - at 60 V rated value 20 A	
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> <li>— at 24 V rated value</li> <li>— at 60 V rated value</li> <li>20 A</li> <li>20 A</li> </ul>	
<ul><li>— at 24 V rated value</li><li>— at 60 V rated value</li><li>20 A</li></ul>	
— at 60 V rated value 20 A	
— at 110 V rated value 20 A	
— at 220 V rated value 1.5 A	
— at 440 V rated value 0.2 A	
— at 600 V rated value 0.2 A	
operating power	
• at AC-3	
— at 230 V rated value 4 kW	
— at 400 V rated value 7.5 kW	
— at 500 V rated value 7.5 kW	
— at 690 V rated value 7.5 kW	
• at AC-3e	
— at 230 V rated value 4 kW	
— at 400 V rated value 7.5 kW	
— at 500 V rated value 7.5 kW	
— at 690 V rated value 7.5 kW	
operating power for approx. 200000 operating cycles at AC-	
4	
• at 400 V rated value 2.5 kW	
• at 690 V rated value 3.5 kW	
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value 3.8 kVA	
• up to 400 V for current peak value n=20 rated value 6.6 kVA	
• up to 500 V for current peak value n=20 rated value 8.3 kVA	
• up to 690 V for current peak value n=20 rated value 10.6 kVA	
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value 2.5 kVA	
• up to 400 V for current peak value n=30 rated value 4.4 kVA	
• up to 500 V for current peak value n=30 rated value 5.5 kVA	
• up to 690 V for current peak value n=30 rated value 7.6 kVA	
short-time withstand current in cold operating state up to 40 °C	
	section acc. to AC-1 rated value
·	section acc. to AC-1 rated value
	section acc. to AC-1 rated value
	ection acc. to AC-1 rated value
	ection acc. to AC-1 rated value
no-load switching frequency	odion doo. to 110 1 fateu value
• at AC 10 000 1/h	
operating frequency	
• at AC-1 maximum 1 000 1/h	
• at AC-2 maximum 750 1/h	
• at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h	
• at AC-3 maximum 750 1/h • at AC-3e maximum 750 1/h	
• at AC-3e maximum 750 1/n • at AC-4 maximum 250 1/h	
Z30 I/II	

Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	230 V
at 60 Hz rated value	230 V
operating range factor control supply voltage rated value of	
magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	37 VA
● at 60 Hz	33 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
● at 60 Hz	0.75
apparent holding power of magnet coil at AC	
● at 50 Hz	5.7 VA
● at 60 Hz	4.4 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.25
closing delay	
• at AC	9 35 ms
opening delay	
• at AC	4 15 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NO contacts for auxiliary contacts instantaneous	1
contact operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	10 A
at 400 V rated value	3 A
at 500 V rated value     at 500 V rated value	2 A
at 690 V rated value     at 690 V rated value	1A
operational current at DC-12	
at 24 V rated value	10 A
at 48 V rated value	
the state of the s	6 A
at 60 V rated value	6 A 6 A
	6 A
at 110 V rated value	6 A 3 A
<ul><li>at 110 V rated value</li><li>at 125 V rated value</li></ul>	6 A 3 A 2 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> </ul>	6 A 3 A 2 A 1 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	6 A 3 A 2 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13	6 A 3 A 2 A 1 A 0.15 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> </ul>	6 A 3 A 2 A 1 A 0.15 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> </ul>	6 A 3 A 2 A 1 A 0.15 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> </ul> at 60 V rated value	6 A 3 A 2 A 1 A 0.15 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> </ul>	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> </ul>	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> </ul>	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul> operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13  at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 115 V rated value at 125 V rated value at 220 V rated value at 600 V rated value contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 115 V rated value at 220 V rated value at 600 V rated value at 220 V rated value at 600 V rated value contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 600 V rated value	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13  at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp]	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13  at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)
at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  operational current at DC-13  at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value  contact reliability of auxiliary contacts  UL/CSA ratings  full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value yielded mechanical performance [hp]	6 A 3 A 2 A 1 A 0.15 A  10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A 1 faulty switching per 100 million (17 V, 1 mA)

or 13-phase AC motor		
	• for 3-phase AC motor	
	— at 200/208 V rated value	3 hp
	<ul> <li>at 220/230 V rated value</li> </ul>	5 hp
Short-circuit protestion	— at 460/480 V rated value	10 hp
Short-circuit protection	— at 575/600 V rated value	10 hp
design of the fuse link  of or short-circuit protection of the main circuit  —with type of coordination 1 required —with type of assignment 2 required  of short-circuit protection of the auxiliary switch required  installation/ mounting/dimensions  mounting position  fastening method  height  fastening method  height  serve was an snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  height  serve was an snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  fastening method  height  serve was snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  fastening method  height  serve was snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  fastening method  height  serve was snap-on mounting onto 35 mm DIN rail according to DIN EN 60715  fastening method  height  from  with side-by-side mounting  frowards  formards  forwards  formards  form	contact rating of auxiliary contacts according to UL	A600 / Q600
• for short-circuit protection of the main circuit  - with type of coordination 1 required  - with type of assignment 2 required  for short-circuit protection of the auxiliary switch required  shallation/mounting/dimensions  mounting position  fastening method  fastening method  screw and snspon mounting orthousing surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can be titled floward and buckward by 4r. 22.5° on ventical mounting surface: can	Short-circuit protection	
with type of coordination 1 required with type of assignment 2 required for short-circuit protection of the auxiliary switch required for switch of the switch of the auxiliary switch required for switch	design of the fuse link	
- with type of assignment 2 required   of or short-circuit protection of the auxiliary switch required     of short-circuit protection of the auxiliary switch re	<ul> <li>for short-circuit protection of the main circuit</li> </ul>	
For short-circuit protection of the auxiliary switch required   yG: 10 A (500 V, 1 kA)	<ul> <li>— with type of coordination 1 required</li> </ul>	gG: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)
mounting position  #/-180" rotation possible on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on vertical mounting surface: can be tilted forward and backward by */-22.5" on mondants  - to fill vertical mounting  -	<ul> <li>— with type of assignment 2 required</li> </ul>	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
mounting position backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on vertical mounting surface; can be tilted forward and backward by +2.5 c? on mounting onto 35 mm DIN rail according to DIN EN 60715.  ### required spacing  ### with side-by-side mounting  ### on wards  ### 10 mm  ### on manual mount and the side  ### of manual mount and the side screw-type terminals  ### screw-type t	for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
fastening method screw and snap-on mounting ortio 35 mm DIN rail according to DIN EN 60715 helight	Installation/ mounting/ dimensions	
helght width 45 mm depth 73 mm required spacing  • with side-by-side mounting  — forwards 10 mm — downwards 10 mm — downwards 10 mm — at the side 0 mm — in grounded parts — for grounded parts — for grounded parts — for grounded parts — for live parts — the side 6 mm — downwards 10 mm — at the side 6 mm — downwards 10 mm — at the side 6 mm — downwards 10 mm — or live parts — forwards 10 mm — downwards 10 mm — upwards 10 mm — upwards 10 mm — upwards 6 mm — conserved 10 mm — side 6 mm — connections 7 erminals  **Type of electrical connection • for main current circuit screw-type terminals • of magnet coil Screw-type terminals • of magn	mounting position	
width depth required spacing  with side-by-side mounting	fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
required spacing  • with side-by-side mounting  — forwards — upwards — downwards — at the side — o mm  • for grounded parts — forwards — upwards — 10 mm  • for grounded parts — forwards — upwards — 10 mm — at the side — downwards — 10 mm — at the side — downwards — 10 mm — odwnwards — to man a	height	58 mm
required spacing  with side-by-side mounting — forwards — upwards — downwards — at the side — for grounded parts — forwards — upwards — 10 mm — opwards — the side — forwards — upwards — 10 mm — upwards — at the side — downwards — to mm — opwards — opwards — opwards — opwards — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — finely stranded with core end processing — solid or stranded — solid or stran	width	45 mm
with side-by-side mounting	depth	73 mm
- forwards 10 mm 1	required spacing	
- upwards 10 mm 1	<ul> <li>with side-by-side mounting</li> </ul>	
- downwards - at the side • for grounded parts - forwards - upwards - at the side • for many side of the side - downwards - to mm - upwards - forwards - downwards - downwards - downwards - at the side - downwards - at the side - for mm - at the side - for main current circuit - for awilliary and control circuit - for awilliary and control circuit - for awilliary and control circuit - at contactor for auxiliary contacts - for main current circuit - solid -	— forwards	10 mm
- at the side  • for grounded parts  - forwards  - upwards  - at the side  - downwards  • for live parts  - forwards  - upwards  • for live parts  - forwards  - upwards  - upwards  - downwards  10 mm  - upwards  - downwards  10 mm  - downwards  - at the side  - 6 mm   Connections/ Terminals  type of electrical connection  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main cortent cross-sections  • for main contacts  - solid  - solid or stranded  - finely stranded with core end processing  • for AWG cables for main contacts  • solid  • stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts	— upwards	10 mm
• for grounded parts	— downwards	10 mm
- forwards 10 mm 1	— at the side	0 mm
- upwards - at the side - downwards - for live parts - forwards - upwards - upwards - upwards - upwards - downwards - upwards - at the side - downwards - the side - downwards - at the side - the side - to mm - at the side  Connections/ Terminals  type of electrical connection - for nain current circuit - for auxiliary and control circuit - for auxiliary and control circuit - at contactor for auxiliary contacts - of magnet coil - solid	<ul> <li>for grounded parts</li> </ul>	
- at the side	— forwards	10 mm
- downwards • for live parts - forwards - upwards - downwards - at the side  Connections/ Terminals  type of electrical connection • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil  type of connectable conductor cross-sections • for AWG cables for main contacts • solid • for WWG cables for main contacts • solid • for yell stranded - finely stranded with core end processing • for auxiliary contacts • solid or stranded • finely stranded with core end processing • for auxiliary contacts	— upwards	10 mm
• for live parts  forwards upwards downwards at the side  Connections/ Terminals  type of electrical connection • for main current circuit • at contactor for auxiliary contacts • for main current circuit • at contactor for auxiliary contacts • for main contacts  solid solid solid or stranded finely stranded with core end processing • for auxiliary contacts	— at the side	6 mm
- forwards 10 mm 1	— downwards	10 mm
- upwards - downwards - at the side  Connections/ Terminals  type of electrical connection	<ul> <li>for live parts</li> </ul>	
- downwards - at the side  Connections/ Terminals  type of electrical connection	— forwards	10 mm
- at the side 6 mm  Connections/ Terminals  type of electrical connection  • for main current circuit screw-type terminals • at contactor for auxiliary contacts Screw-type terminals • of magnet coil Screw-type terminals  • type of connectable conductor cross-sections • for main contacts  - solid - solid or stranded - finely stranded with core end processing • stranded • stranded • stranded • finely stranded with core end processing • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • finely stranded with core end processing • solid • stranded • finely stranded with core end processing • finely stranded conductor cross-sections • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts • for auxiliary contacts	— upwards	10 mm
type of electrical connection  • for main current circuit  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  — solid  — solid conductor cross-sections  • for AWG cables for main contacts  • solid  • stranded  • stranded  • stranded  • stranded  • finely stranded with core end processing  • finely stranded with core end processing  • solid  • stranded  • finely stranded with core end processing  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts	— downwards	10 mm
type of electrical connection  • for main current circuit  • for auxiliary and control circuit  • at contactor for auxiliary contacts  • of magnet coil  type of connectable conductor cross-sections  • for main contacts  — solid  — solid or stranded — finely stranded with core end processing  • for AWG cables for main contacts  • solid  • stranded • finely stranded with core end processing  • for auxiliary contacts  • for auxiliary contacts  • for auxiliary contacts		6 mm
• for main current circuit     • for auxiliary and control circuit     • at contactor for auxiliary contacts     • of magnet coil  type of connectable conductor cross-sections     • for main contacts     — solid     — solid or stranded     — finely stranded with core end processing     • for finely stranded with core end processing     • solid     • stranded     • solid     • solid     • solid     • for AWG cables for main contacts      • solid     • stranded     • finely stranded with core end processing     • for AWG cables for main contacts      • solid     • solid     • stranded     • stranded     • stranded     • finely stranded with core end processing     • for auxiliary contacts  • solid or stranded     • finely stranded with core end processing     • for auxiliary contacts	Connections/ Terminals	
of ro auxiliary and control circuit     oat contactor for auxiliary contacts     of magnet coil     Screw-type terminals     of magnet coil     Screw-type terminals     veror connectable conductor cross-sections     of main contacts     osolid	type of electrical connection	
at contactor for auxiliary contacts  of magnet coil  type of connectable conductor cross-sections  of main contacts  - solid  - solid or stranded  - finely stranded with core end processing  of auxiliary contacts  of inely stranded with core end processing  of connectable conductor cross-sections  of or auxiliary contacts	for main current circuit	screw-type terminals
of magnet coil      type of connectable conductor cross-sections         of or main contacts	<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
type of connectable conductor cross-sections  • for main contacts  — solid — solid or stranded — finely stranded with core end processing • for AWG cables for main contacts  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²  2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  2x (20 16), 2x (18 14), 2x 12  connectable conductor cross-section for main contacts • solid • stranded • stranded with core end processing connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing connectable conductor cross-sections • for auxiliary contacts • for auxiliary contacts	<ul> <li>at contactor for auxiliary contacts</li> </ul>	Screw-type terminals
<ul> <li>for main contacts</li> <li>— solid</li> <li>— solid or stranded</li> <li>— solid or stranded with core end processing</li> <li>— finely stranded with core end processing</li> <li>• for AWG cables for main contacts</li> <li>— solid</li> <li>— stranded</li> <li>— stranded</li> <li>— stranded with core end processing</li> <li>— solid or stranded with core end processing</li> <li>— solid or stranded</li> <li>— solid or stranded with core end processing</li> <li>— solid or stranded</li> <li>— solid or strand</li></ul>	of magnet coil	Screw-type terminals
solid 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² solid or stranded 2x (0.5 1,5 mm²), 2x (0.75 2,5 mm²), 2x 4 mm² finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)  • for AWG cables for main contacts 2x (20 16), 2x (18 14), 2x 12  connectable conductor cross-section for main contacts  • solid 0.5 4 mm²  • finely stranded with core end processing 0.5 2.5 mm²  connectable conductor cross-section for auxiliary contacts  • solid or stranded 0.5 4 mm²  • finely stranded with core end processing 0.5 2.5 mm²  type of connectable conductor cross-sections • for auxiliary contacts	type of connectable conductor cross-sections	
- solid or stranded - finely stranded with core end processing • for AWG cables for main contacts • solid • stranded • finely stranded with core end processing • stranded • finely stranded with core end processing  connectable conductor cross-section for main contacts • solid • stranded • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts • solid or stranded • finely stranded with core end processing  tops of connectable conductor cross-sections • for auxiliary contacts • for auxiliary contacts	• for main contacts	
- finely stranded with core end processing  • for AWG cables for main contacts  • solid  • stranded  • stranded  • finely stranded with core end processing  • solid or stranded  • finely stranded with core end processing  • for auxiliary contacts	— solid	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
<ul> <li>for AWG cables for main contacts</li> <li>connectable conductor cross-section for main contacts</li> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>finely connectable conductor cross-sections</li> <li>for auxiliary contacts</li> </ul>	— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm²
connectable conductor cross-section for main contacts  • solid  • stranded  • stranded  • finely stranded with core end processing  connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  • finely stranded with core end processing  • for auxiliary contacts  • for auxiliary contacts	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
<ul> <li>solid</li> <li>stranded</li> <li>finely stranded with core end processing</li> <li>solid or stranded</li> <li>finely stranded</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>for auxiliary contacts</li> </ul>	for AWG cables for main contacts	2x (20 16), 2x (18 14), 2x 12
<ul> <li>stranded</li> <li>finely stranded with core end processing</li> <li>connectable conductor cross-section for auxiliary contacts</li> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>finely stranded with core end processing</li> <li>type of connectable conductor cross-sections</li> <li>for auxiliary contacts</li> </ul>	connectable conductor cross-section for main contacts	
• finely stranded with core end processing     connectable conductor cross-section for auxiliary contacts     • solid or stranded     • finely stranded with core end processing     type of connectable conductor cross-sections     • for auxiliary contacts	• solid	
connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing  type of connectable conductor cross-sections  • for auxiliary contacts	• stranded	
<ul> <li>solid or stranded</li> <li>finely stranded with core end processing</li> <li>type of connectable conductor cross-sections</li> <li>for auxiliary contacts</li> </ul>	finely stranded with core end processing	0.5 2.5 mm²
<ul> <li>◆ finely stranded with core end processing</li> <li>type of connectable conductor cross-sections</li> <li>◆ for auxiliary contacts</li> </ul>	connectable conductor cross-section for auxiliary contacts	
type of connectable conductor cross-sections  • for auxiliary contacts	• solid or stranded	
• for auxiliary contacts	finely stranded with core end processing	0.5 2.5 mm²
	type of connectable conductor cross-sections	
	<ul> <li>for auxiliary contacts</li> </ul>	
— solid or stranded 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²	— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²
— finely stranded with core end processing 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
● for AWG cables for auxiliary contacts 2x (20 16), 2x (18 14), 2x 12	for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross section		

<ul> <li>for main contacts</li> </ul>	20 12
<ul> <li>for auxiliary contacts</li> </ul>	20 12
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes; with 3RH29
suitability for use safety-related switching OFF	Yes; applies only to contactor operating mechanism
proportion of dangerous failures	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
IEC 61508	
T1 value	
<ul> <li>for proof test interval or service life according to IEC 61508</li> </ul>	20 a
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	

**General Product Approval** 







Confirmation





General Product Approval EMV Functional Saftey Test Certificates

<u>KC</u>





Type Examination Certificate Type Test Certificates/Test Report

Special Test Certificate

## Marine / Shipping













Marine / Shipping other Railway Environment



**Miscellaneous** 

Confirmation

Confirmation

Special Test Certificate



## Environment

Environmental Confirmations

### Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2018-1AP01

### Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1AP01

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

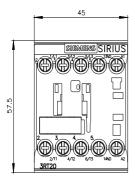
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AP01

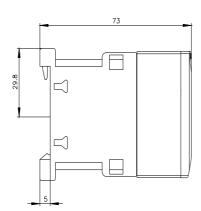
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) <a href="http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2018-1AP01&lang=en">http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2018-1AP01&lang=en</a>

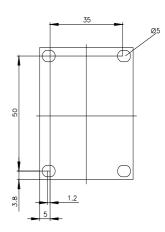
Characteristic: Tripping characteristics, I2t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AP01/char

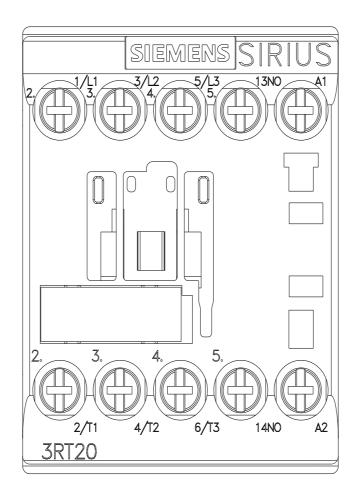
Further characteristics (e.g. electrical endurance, switching frequency)

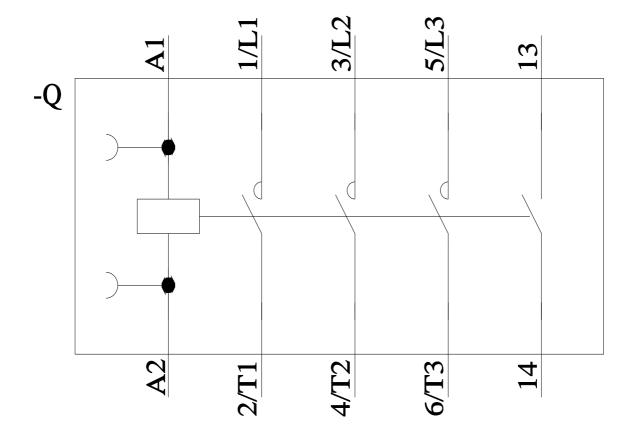
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-1AP01&objecttype=14&gridview=view1











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3/15/2024